

Deam's Grasses of Indiana²

The people of the State of Indiana are to be congratulated on having a citizen competent to write a book of this nature and a Department of Conservation to provide means for its publication and distribution. Convincing in its scientific treatment, lucid in its presentation, and complete in its information, the "Grasses of Indiana" certainly approaches the ideal.

The plan of the book is comprehensive. Besides a careful and extended description of the grass family in general, it provides keys to the tribes, genera, and species, a full bibliography, a glossary, a list of reported but excluded species with the reasons therefor, a list of new state and country records, and a list of new species and names. The single new species in *Panicum Deamii*, described by Hitchcock and Chase. Under each genus a technical description appears with other general information about its range and number of species included. For each species the usual description is supplemented by full notes on its habitat, its importance in agriculture, if any, and its general geographic description, by a map showing its known range through the state, and by a carefully drawn figure showing the details of its structure. The figures are with one exception by Professor Paul Weatherwax of Indiana University. A general map shows the floristic regions of the state.

The grasses of Indiana comprise 201 species, 19 varieties, and 7 minor forms, and constitute about a tenth of the total flora of the state. In his preparation of the book the author examined over seven thousand specimens and it is noteworthy that just half of them were in his personal herbarium. The maps show the herbaria in which specimens from each county may be found.

H. A. GLEASON

² Deam, Charles C. Grasses of Indiana. pp. 356, with 23 figures, 87 plates, 218 maps. Published by the Department of Conservation, State of Indiana, 1929. Price not stated.

FIELD TRIPS OF THE CLUB

FIELD TRIP OF SEPTEMBER 8, 1929

Muggy, hot weather, threatening rain, did not prevent ten enthusiastic botanists from participating in the trip to Fresh Kills and vicinity, Staten Island. Most of those present promis-

ed to send some of the specimens collected on this trip to Mrs. Mitchell for the Torrey Club Herbarium.

At the start of the trip, near the bus terminal at Richmond, several *Polygonum*s were found in the stream where it passes through the culvert under the road—viz. the tearthumbs, *Polygonum arifolium* and *P. sagittatum*, also *P. Hydropiper* and the common Lady's Thumb nearby, *P. Persicaria*. *Impatiens biflora*, conspicuous at this time of the year, grew rankly along the banks of the stream. In the meadow nearby we found that *Amorpha fruticosa* was established, and also *Solidago rugosa* and *canadensis* as well as the Iron Weed—*Veronica*. Where the road turns by the fine old church of St. Andrew, parts of which date back to 1709, *Broussonetia papyrifera* and *Maclura pomifera* appeared to have established themselves.

As we walked further along the road bordering the marsh land around the "Fresh Kills" colonies of tall yellow wild sunflowers could be seen at a little distance below us on the left which appeared on examination to be *Helianthus giganteus*. A specimen of *Helianthus* was discovered later which possessed a glabrous stem and corresponded more nearly to *H. grosseserratus*, but these two species, according to the manual, are very near to each other. Luxurious *Amaranthus ambrosioides* was found near the roadside. Near some old houses we found an excellent deep spring on the left, near the road, with sides stoned and delicious cool water which must have been innocuous if we are to judge by results, for we all drank deeply of it.

Everything about us was so moist that it was difficult to find a dry place whereon to sit while eating our lunch. We finally spied a steep little hill on the right, not far from the road, and after much scrambling through the brush and (some of us) getting "runs" in stockings, we arrived at the top and found to our surprise an old abandoned cemetery. About a half-dozen grave-stones were in evidence—most of them prone on the ground and one even had been used as a prop for a camp fire.

This hill, according to Wm. T. Davis,¹ is Ketcham's or Cemetery Hill, the last hill in the range that commences at Brighton Point and terminates suddenly at Richmond Creek. "A better view may be had of the meadows from the top of this hill than from Look-Out-Place (the next elevation to the northeast.) For

¹ Proc. of Nat. Sci. Assn. of Staten Island. 5: 42. 1896.

over a hundred years the crown of the hills has been used as a family burying ground."

After lunch we proceeded to explore the salt marshes near the kill. On the border of the marshes we were pleased to run across *Bidens comosa*, so different with its simple leaves from the common *B. frondosa* which we had already seen. The green bracts surrounding the flower heads are also conspicuous. In the marsh, *Iva oraria*, the Marsh Elder, was abundant and in flower, while *Baccharis halimifolia*, the Groundsel Tree, could be seen from a distance with its masses of small white flower heads—both pistillate and staminate flowers being plentiful. *Atriplex patula* var. *hastata* was everywhere underfoot and climbing over other plants. The pretty little *Gerardia maritima* was also found in the new short salt grass, recently cut for hay, and later we found the *Gerardia purpurea*. *Pluchia camphorata*, one of the objects of the trip, was collected here but was not plentiful. Perhaps the greatest thrill of the day was the finding of the beautiful, rose-colored *Sabatia stellaris*, at first in such small numbers that we let it stay, but coming upon a larger colony afterwards, we took a few specimens. An umbelliferous plant with filiform leaves was found which proved to be *Ptilimnium capillaceum*, mock bishop's weed. Most of the party returned via S. I. R. R. from Eltingville, walking to the station, but some took the bus back from Richmond.

A. H. GRAVES

FIELD TRIP OF OCTOBER 19

Twenty six members and friends of the Torrey Club met at Hillside, Queens Borough, for an afternoon trip to study goldenrods. The leader of the trip, Dr. Alfred Gunderson had gone over the ground carefully and listed ten species of goldenrod to be found. He had also prepared a simple key to these species, based primarily on shape of the flower cluster,—mimeographed copies of this key were given the members. In a field not far from the station the rapid-growing kudzu vine was noticed. The goldenrods found were collected, to be compared and worked out with the key later. While it was late for any flowers, some of the goldenrods were in good condition, and all of those looked for could be determined. Dr. Gunderson's key is included as it may be of interest to others.

SOLIDAGO (About 50 species, about 25 around New York)

INFLORESCENCE FLAT TOPPED, HEADS SESSILE

2-4 ft., lvs. 3-5 veined, fragrant—*graminifolia* (Flat top G.)

1-2 ft., lvs. 1 veined—*tenuifolia* (Narrowleaved G.)

INFLORESCENCE OF AXILLARY CLUSTERS

Leaves narrow—*caesia* (Wreath G.) Stem "zigzag," often purple

INFLORESCENCE AN EQUILATERAL PANICLE

Color whitish—*bicolor* (Silverrod) Stem pubescent

INFLORESCENCE A ONE SIDED PANICLE (secund)

Leaves nearly of one kind, narrow, three veined

2-6 ft., stem grayish, puberulent, leaves thick, heads large—*altissima*
(Tall G.)

1-4 ft., stem glabrous below, lvs. thin, heads small—*canadensis* (From
Nfd. south)

2-7 ft., stem and lvs. glabrous, leaves broader, sharply serrate, rays long—
serotina (Late G.)

Lower leaves much larger, pinnately veined

Plants low, lvs. oblanceolate, grayish—*nemoralis* (Low G.)

Plants taller

Stem villous, leaves thick wrinkled, rays 6-9—*rugosa* (From Nfd.)
(Rough-leaved G.)

Stem glabrous, lvs. thin tapering, racemes loosely recurved spreading,
rays 4—*ulmifolia* (Elmleaf G.)

Stem & leaves glabrous, turning red—*juncea* (Early G. Upper lvs.
entire smooth)

FIELD TRIP OF OCTOBER 27

Twenty-five members and friends of the club were led by Mr. J. A. Allis on a very interesting and delightful trip from Sterling Forest to Cedar Pond. Of as much interest as the species of plants found, was the mass effect of the foliage. The oaks, red, black, scarlet, white and chestnut, still held most of their leaves and covered the hills with reds, browns and dull yellows. Sugar maples were yellow and red, beeches were mostly brown or nearly leafless, but in one of the stream valleys a group among the hemlocks were a golden yellow. From the fire lookout tower on Sterling Mountain the effect of the colors was especially fine. On the top of the mountain it was noted that the scrub oak, *Quercus ilicifolia*, had lost most of its leaves and all of its fruits. The approach to Cedar Pond is over an old corduroy road through a dense growth of white cedar, *Chamaecyparis thyoides*, and rhododendron with a few red spruce, *Picea rubra*, the ground covered with fern mosses and hypnoms and frequent pat-

ches of the liverwort, *Bazzania*. Around the pond the shrubby growth whose roots seemed to be the support of the bog, was mostly leather leaf, *Chamaedaphne calyculata*, with a little pale laurel, *Kalmia polifolia*, and high-bush huckleberry. Growing in the sphagnum there was an abundance of pitcher plants, ranging from seedlings with leaves less than an inch long to mature plants, many of them a deep red in color. Near the edge of the bog were some large patches of the trailing club moss, *Lycopodium complanatum*, with it the more erect tree club moss, *L. obscurum dendroideum* on somewhat higher ground and the bog club moss, *L. inundatum*, on the lower, damper ground. Here and there were small patches of the shining club moss, *L. lucidulum*. Where there were rock outcrops the ledges were fringed with the polypod fern, throughout the woods were quantities of the marginal and intermediate fern, splendid plants of the Christmas fern bordered the paths, some, approaching the variety *Schweinitzii*, had fertile fronds that measured 36 inches, the sterile over 24 inches. Several plants of *Botrychium obliquum* and a few of the variety *dissectum* were found. The three Osmundas and the hay-scented fern were noted, but all brown and withered as was the common brake, the latter with stipes bent over and crushed.

For those who had been on the trip the week before it was interesting to observe nearly all the goldenrods observed that time, excepting *Solidago tenuifolia* and *ulmifolia* and to add the ragged goldenrod, *S. squarrosa*, the broad-leaved goldenrod, *S. latifolia*, and the large-leaved, *S. macrophylla*.

GEORGE T. HASTINGS

HOOK MOUNTAIN EXCURSION, NOVEMBER 3

Four members of the club, undaunted by a day of frequent heavy gusts of rain, made the excursion from Congers to Nyack, along the shore of the Hudson, on Sunday, November 3. The route between the lower landing of the Hook Mountain section of the Palisades Interstate Park, under the beetling Verdreitege Hook, to North Nyack, was over great masses of trap talus, some original and unaltered by man, some left when the quarries were abandoned ten years ago. Only a few plants remained in bloom, those noted including *Helianthus decapetalus*, *Aster*

ericoides, *Eupatorium ageratoides*, and *Geranium Robertianum* which has about the longest blooming season of any plant I know, almost from the latest spring frost to the killing frosts of autumn.

Interesting species new to some of the party were the Bladder Nut, *Staphylea*, in great banks with thousands of the conspicuous three lobed bladdery fruits: *Triosteum*, the Wild Coffee, or Tinker's Weed, with plentiful orange fruit which some of the party gathered to take home to try out as a beverage; and *Paulownia*, which has established itself at the foot of the cliffs, as it has along the Palisades. Signs were seen of the American Wood Rat, which still persists in holes in the talus, the only locality where it is still found within 30 miles of New York City, so far as I know. Striking exposures of the red sandstone underlying the trap cliffs were seen, including some partings of the strata with ripple marks and what appeared to be casts of marine worm burrows.

RAYMOND H. TORREY

PROCEEDINGS OF THE CLUB

MEETING OF OCTOBER 16, 1929

The meeting was called to order by President Denslow.

Mr. S. S. Shouse, Long Island College Hospital, Brooklyn was unanimously elected to membership in the club.

Dr. Denslow presented an appeal from Dr. Clyde Fisher for the support of the Coordinating Council of Nature Activities by a financial contribution from the club. This was referred to a committee consisting of Dr. Britton, Dr. Barnhart and Dr. McLean.

Dr. Graves proposed an amendment to the constitution providing for life memberships in the club. This was referred to a committee consisting of Dr. Gleason, Mrs. Trelease, and Dr. Graves, to be reported back to the club at its next regular meeting.

Dr. Hazen proposed raising the subscription rate for the Torrey Bulletin from four dollars (\$4.00) per year to six dollars (\$6.00) per year to libraries and non-member subscribers. This motion was seconded by Dr. Harper and unanimously adopted.